

171050

VANGUARD

ENVIRONMENTAL, INC.

ENVIRONMENTAL, HEALTH & SAFETY COMPLIANCE SPECIALISTS

Corporate Office

4500 South Garnett, Suite 250 • Tulsa, OK 74146 • Ph. (918) 641-5588 • FAX (918) 641-0617 • www.vanguardenvi.com

Atlanta • Chicago • Cincinnati/Dayton • Dallas/Ft. Worth • Denver • Houston • Kansas City • Los Angeles •

Minneapolis/St. Paul • Oklahoma City • Phoenix • St. Louis • Tulsa • Wichita

THE EHS COMPLIANCE MANAGEMENT PROGRAM

**AIR PERMITTING &
RELATED SERVICES
STATE SPECIFIC AND FEDERAL
(Titles III – VI)**

COPYRIGHT 2001, VANGUARD ENVIRONMENTAL, INC.
This document was processed using Year 2001 Compliance Technology

FOR

**ARROW GEAR
DOWNERS GROVE, IL
2000 REPORTING YEAR**

"Total Quality Environmental Management"
Turn-Key Compliance Nationwide

TABLE OF CONTENTS

EXECUTIVE BRIEFING	SECTION 1
EIQ (TURN-AROUND DOCUMENT) FORMS	SECTION 2
CALCULATION SPREADSHEETS AND NOTES	SECTION 3
STATE REGULATIONS PERTAINING TO EIQ'S	SECTION 4

SECTION 1



Corporate Office

4500 South Garnett, Suite 250 • Tulsa, OK 74146 • Ph. (918) 641-5588 • FAX (918) 641-0617 • www.vanguardenvl.com
Atlanta • Chicago • Cincinnati/Dayton • Dallas/Ft. Worth • Denver • Houston • Kansas City • Los Angeles
Minneapolis/St. Paul • Oklahoma City • Phoenix • St. Louis • Tulsa • Wichita

EXECUTIVE SUMMARY

FOR

Arrow Gear

RE: 2000 Annual Emission Inventory

BACKGROUND

A Throughput Request completed by Arrow Gear established 2000 product usage numbers. This data was utilized to generate emission numbers reflected on the 2000 EIQ.

REGULATORY SETTING

Information contained within the Emissions Report fulfills the report requirements that were initially established under the Clean Air Act (CAA) as amended in 1990. Annual emissions' reporting was established by the State of Illinois in accordance with Section 182(a)(3)(B) of the CAA. The specific reporting requirements are established in Chapter 35 of the Illinois Administrative Code in accordance with Sections 201.302(a) and 201.302(b). (See Section 4)

SUMMARY OF FINDINGS

- The Arrow Gear Corporation is a manufacturer of loose gear components. Operation of machinery/processes such as: heat treat furnaces, broaching machines and solvent degreasing units contribute to emissions of air pollutants.
- No new equipment or processes contributing to air emissions were added in 2000.
- Comparison of 1999 to 2000 throughput quantities revealed an increase of less than one percent, from 20.2 mmcf to 20.8 mmcf of natural gas combustion, respectively. The hours of operation in 2000 remained the same as reported in 1999.

"Total Quality Environmental Management"
Turn-Key Compliance . . . Nationwide

- It is critical to the compliance status of Arrow Gear that their processes and associated emissions be reviewed on a continuing basis.

It has been our experience that effective air quality management programs are the result of effective communication between all players of the management team. The material presented in this executive briefing is designed to provide supplementary information, and is just one avenue used to disseminate regulatory information. As Arrow Gear pursues a proactive air quality management program, you can be assured that any questions or concerns that arise will be addressed aggressively, thoroughly, and confidentially. Remember, we are here to serve you and your facility.

SECTION 2

VANGUARD ENVIRONMENTAL, INC.

ENVIRONMENTAL, HEALTH & SAFETY COMPLIANCE SPECIALISTS

Corporate Office

4500 South Garnett, Suite 250 • Tulsa, OK 74146 • Ph. (918) 641-5588 • FAX (918) 641-0617 • www.vanguardenvl.com

Atlanta • Chicago • Cincinnati/Dayton • Dallas/Ft. Worth • Denver • Houston • Kansas City • Los Angeles

Minneapolis/St. Paul • Oklahoma City • Phoenix • St. Louis • Tulsa • Wichita

April 27, 2001

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance and Systems Management
Attn: Annual Emission Report
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

RE: Arrow Gear
2301 Curtiss St.
Downers Grove, IL 60515

To Whom It May Concern,

Please find enclosed 2000 Annual Emissions Report, Short Form, for Arrow Gear, Downers Grove, IL.

If there are any questions concerning the facility, or the enclosed information, please feel free to contact me at (918) 641-5588.

Sincerely,



Brad Livesay
Environmental Manager
Vanguard Environmental, Inc.

"Total Quality Environmental Management"
Turn-Key Compliance Nationwide

DAPC - ANNUAL EMISSIONS REPORT - 2000

043030ABG - ARROW GEAR COMPANY

- SOURCE DATA -

SOURCE
IDS AND
LOCATION

AIRS: 17-043-0074	IEPA USE ONLY	LATITUDE: 41:47:31.0000	
FINDS: ILD005075205	IEPA USE ONLY	LONGITUDE: 88:02:19.0000	
FEIN: 36-2343766		YEAR OF DATUM: UNKN	
D&B: 00-507-5205		SCALE:	
SIC 1: 3566		METHOD: E	
SIC 2:		ACCURACY:	
SIC 3:		WHERE MEASURED:	

SOURCE
ADDRESS

ARROW GEAR COMPANY

2301 CURTISS STREET
DOWNERS GROVE, IL 60515

CONTACT: MICHAEL CERVINKA

PHONE: 630-969-7640

EXT: 235

FAX: 630-969-0253

ANNUAL
EMISSION
REPORT
MAILING
ADDRESS

ARROW GEAR COMPANY

2301 CURTISS STREET
DOWNERS GROVE, IL 60515

CONTACT: MICHAEL CERVINKA

PHONE: 630-969-7640

EXT: 235

FAX: 630-969-0253

ALL ANNUAL EMISSIONS REPORT DATA VERIFIED, MODIFIED OR PROVIDED ON BEHALF OF THE
COMPANY NAMED ABOVE, WHETHER SUBMITTED ELECTRONICALLY OR IN WRITING, REPRESENTS
THE BEST AVAILABLE INFORMATION AND IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.


AUTHORIZED SIGNATURE

Michael J. Cervinka,
Director of Facilities

TYPED OR PRINTED NAME AND TITLE

DATE

4-30-01

630-969-7640

TELEPHONE NUMBER

DAPC - ANNUAL EMISSIONS REPORT - 2000

043030ABG - ARROW GEAR COMPANY

- ANNUAL SOURCE EMISSIONS -

POLLUTANT CODE	ALLOWABLE EMISSIONS (TONS/YEAR)	EMISSIONS REPORTED FOR 1998 (TONS/YEAR)	IEPA 1999 ESTIMATED EMISSIONS (TONS/YEAR)	SOURCE REPORTED EMISSIONS FOR (TONS/YEAR) 2000
CO	1.092000	0.210000	0.419600	0.21
NOX	4.892160	1.000000	1.883200	1.04
PART	3.494400	0.080000	1.556250	0.08
PM10		0.080000		0.08
SO2		0.006000		0.006
VOM	4.673760	0.720000	1.361250	0.06

043030ABG - ARROW GEAR COMPANY

- PERMIT LISTING -

PERMIT NUMBER	TYPE OF PERMIT	OPERATION NAME	STATUS	STATUS DATE	EXPIRES
73060221	LIFETIME	GEAR MANUFACTURING	GRANTED	04-23-1997	

043030ABG - ARROW GEAR COMPANY

- Equipment Listing -

Emission Points

0002 TWO SUNBEAM HEATMASTER HEATTREAT FURNACES
0004 QUENCH PRESS
0006 WASHER HEAT TREAT
0008 THREE BROACHING MACHINES
0009 LARGE SOLVENT WASH
0010 SMALL SOLVENT WASH
0017 TWO AIR MAKE-UP UNITS

Control Devices

0002 BAGHOUSE
0003 ROTOCONE DUST COLLECTOR
0004 TORIT BAGHOUSE - VENT INSIDE

Stacks

0001
0002
0003
0004
0005
0006
0007
0008
0009
0010
0011 CREATED STACK
0012 CREATED STACK
0013 CREATED STACK
0014 CREATED STACK
0015 CREATED STACK

ARKANSAS ENVIRONMENTAL PROTECTION AGENCY
DAPC - ANNUAL EMISSIONS REPORT - 2000

043030ABG - ARROW GEAR COMPANY

- Equipment Listing -

Stacks

0016 CREATED STACK

0017 CREATED STACK



Corporate Office

4500 South Garnett, Suite 250 • Tulsa, OK 74146 • Ph. (918) 641-5588 • FAX (918) 641-0617 • www.vanguardenvl.com

Atlanta • Chicago • Cincinnati/Dayton • Dallas/Ft. Worth • Denver • Houston • Kansas City • Los Angeles

Minneapolis/St. Paul • Oklahoma City • Phoenix • St. Louis • Tulsa • Wichita

April 27, 2001

Mr. Mike Cervinka
Arrow Gear
2301 Curtiss St.
Downers Grove, IL 60515

Dear Mr. Cervinka,

Enclosed is the Annual Emission Report (AER), calculation set pertaining to 2000 throughput values and process diagrams for the Arrow Gear Facility. Illinois requires facilities to submit annual emission reports, quantifying their emissions, by May 1 of the following year of data. Arrow Gears' file copy of information being submitted to the Illinois EPA Bureau of Air is located in Section 2 of this book.

Located in the front pocket of this manual is the original AER, please sign and date page 1 of the AER, marked with a "SIGN AND DATE" tab. *It is imperative that this document be postmarked no later than May 1, 2001.*

Upon completion of the forms, please forward each packet to the respective address on the cover sheet.

The information contained herein is designed to provide a broad overview of the many air quality standards promulgated by local, state and federal regulatory agencies for emitters of air pollutants. Subject regulations are amended and updated frequently, sometimes retroactively. It is not the objective of this executive briefing to specifically list every regulation due to the comprehensive and dynamic nature of regulatory requirements. Management of air pollutants, and its regulation by subject entities, is a continuing process of evaluation, assessment and verification.

It has been a pleasure working with Arrow Gear and its staff. Feel free to call me anytime at (918) 641-5588 ext. 207.

"Total Quality Environmental Management"
Turn-Key Compliance Nationwide

Sincerely.

A handwritten signature in black ink, appearing to read 'Brad Livesay', with a stylized flourish at the end.

Brad Livesay
Environmental Manager
Vanguard Environmental, Inc.

043030ABG - ARROW GEAR COMPANY

- SOURCE DATA -

SOURCE
IDS AND
LOCATION

AIRS: 17-043-0074	IEPA USE ONLY	LATITUDE: 41:47:31.0000
FINDS: ILD005075205	IEPA USE ONLY	LONGITUDE: 88:02:19.0000
FEIN: 36-2343766		YEAR OF DATUM: UNKN
D&B: 00-507-5205		SCALE:
SIC 1: 3566		METHOD: E
SIC 2:		ACCURACY:
SIC 3:		WHERE MEASURED:

SOURCE
ADDRESS

ARROW GEAR COMPANY

2301 CURTISS STREET
DOWNERS GROVE, IL 60515

CONTACT: MICHAEL CERVINKA

PHONE: 630-969-7640

EXT: 235

FAX: 630-969-0253

ANNUAL
EMISSION
REPORT
MAILING
ADDRESS

ARROW GEAR COMPANY

2301 CURTISS STREET
DOWNERS GROVE, IL 60515

CONTACT: MICHAEL CERVINKA

PHONE: 630-969-7640

EXT: 235

FAX: 630-969-0253

ALL ANNUAL EMISSIONS REPORT DATA VERIFIED, MODIFIED OR PROVIDED ON BEHALF OF THE COMPANY NAMED ABOVE, WHETHER SUBMITTED ELECTRONICALLY OR IN WRITING, REPRESENTS THE BEST AVAILABLE INFORMATION AND IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

AUTHORIZED SIGNATURE_____
DATE_____
TYPED OR PRINTED NAME AND TITLE_____
TELEPHONE NUMBER

043030ABG - ARROW GEAR COMPANY

- ANNUAL SOURCE EMISSIONS -

POLLUTANT CODE	ALLOWABLE EMISSIONS (TONS/YEAR)	EMISSIONS REPORTED FOR 1998 (TONS/YEAR)	IEPA 1999 ESTIMATED EMISSIONS (TONS/YEAR)	SOURCE REPORTED EMISSIONS FOR (TONS/YEAR) 2000
CO	1.092000	0.210000	0.419600	0.21
NOX	4.892160	1.000000	1.883200	1.04
PART	3.494400	0.080000	1.556250	0.08
PM10		0.080000		0.08
SO2		0.006000		0.006
VOM	4.673760	0.720000	1.361250	0.06

043030ABC - ARROW GEAR COMPANY

- PERMIT LISTING -

PERMIT NUMBER	TYPE OF PERMIT	OPERATION NAME	STATUS	STATUS DATE	EXPIRES
73060221	LIFETIME	GEAR MANUFACTURING	GRANTED	04-23-1997	

043030ABG - ARROW GEAR COMPANY

- Equipment Listing -

Emission Points

0002 TWO SUNBEAM HEATMASTER HEATTREAT FURNACES
0004 QUENCH PRESS
0006 WASHER HEAT TREAT
0008 THREE BROACHING MACHINES
0009 LARGE SOLVENT WASH
0010 SMALL SOLVENT WASH
0017 TWO AIR MAKE-UP UNITS

Control Devices

0002 BAGHOUSE
0003 ROTOCLONE DUST COLLECTOR
0004 TORIT BAGHOUSE - VENTS INSIDE

Stacks

0001
0002
0003
0004
0005
0006
0007
0008
0009
0010
0011 CREATED STACK
0012 CREATED STACK
0013 CREATED STACK
0014 CREATED STACK
0015 CREATED STACK

043030ABG - ARROW GEAR COMPANY

- Equipment Listing -

Stacks

0016 CREATED STACK

0017 CREATED STACK

SECTION 3

Calculation #1: Combustion Emissions

$(212,035 \text{ Therms})(100,000 \text{ BTU/Therm})/(1020 \text{ BTU/MMCF})$

2000 Natural Gas Consumption for Facility = 20.8 MMCF

Actual (TPY) Combustion Emissions

$$\text{PM-10 TPY} = (20.8 \text{ mmcf})(7.6 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lbs.}) = 0.08 \text{ TPY}$$

$$\text{PART TPY} = (20.8 \text{ mmcf})(7.6 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lbs}) = 0.08 \text{ TPY}$$

$$\text{SO}_2 \text{ TPY} = (20.8 \text{ mmcf})(0.6 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lbs}) = 0.006 \text{ TPY}$$

$$\text{NOX TPY} = (20.8 \text{ mmcf})(100 \text{ lbs/mmcf}) (1 \text{ ton}/2000 \text{ lbs}) = 1.04 \text{ TPY}$$

$$\text{CO TPY} = (20.8 \text{ mmcf})(21 \text{ lbs/mmcf}) (1 \text{ ton}/2000 \text{ lbs}) = 0.21 \text{ TPY}$$

$$\text{VOM TPY} = (20.8 \text{ mmcf})(5.5 \text{ lb/mmcf}) * (1 \text{ ton}/2000 \text{ lbs}) = 0.06 \text{ TPY}$$

*AP-42.1.4 Emission Factors. NOX and CO Emission Factors as stipulated in permit.

This calculation includes combustion emissions from all natural gas fired equipment in the facility using the total gas throughput and average emission factors.

Calculation #2: Solvent Emissions from Parts Washers

Solvent VOC Emissions (TPY)

$$\text{VOM TPY} = 2 \text{ units} \times 0.33 \text{ tons/year/unit} = 0.66 \text{ TPY}$$

Note: AP-42.4.6, Table 4.6-2

Calculation #3: Total VOM Emissions:

$$\text{VOM TPY} = \text{VOM from Combustion} + \text{VOM from Solvent} = 0.06 + 0.66 = 0.72 \text{ TPY}$$

Other Particulate Emissions: It was assumed that the other particulate emissions from the facility were negligible for the purposes of this Emissions Inventory.

SECTION 4

SUBPART K: RECORDS AND REPORTS**Section 201.301 Records**

The owner or operator of any emission source or air pollution control equipment shall maintain, as a minimum: records detailing all activities pursuant to any compliance program and project completion schedule pursuant to Subpart H; records detailing all malfunctions, breakdowns or startups pursuant to Subpart I and records of all monitoring and testing conducted pursuant to Subpart J, plus records of all monitoring and testing of any type whatsoever conducted with respect to specified air contaminants. All such records shall be made available to the Agency at any reasonable time.

- a) The Agency may adopt procedures which:
 - 1) Require additional records be maintained consistent with these regulations; and
 - 2) Set forth the format in which all records shall be maintained.
- b) Such procedures and formats, and revisions thereto, shall not become effective until filed with the Secretary of State as required by the APA Act.

Section 201.302 Reports

- a) The owner or operator of any emission unit or air pollution control equipment, unless specifically exempted in this Section, shall submit to the Agency as a minimum, annual reports detailing the nature, specific emission units and total annual quantities of all specified air contaminant emissions; provided, however, that the Agency may require more frequent reports where necessary to accomplish the purposes of the Act and this Chapter.
- b) The Agency may adopt procedures which require that additional reports be submitted, and which set forth the format in which all reports shall be submitted. Such procedures and formats, and revisions thereto, shall not become effective until filed with the Secretary of State as required by the APA Act.
- c) All emission data received by the Agency, shall be available for public inspection at reasonable times and upon reasonable notice.
- d) Retail gasoline dispensing operations are exempt from the requirements of subsection (a) above unless the source has failed to comply with 35 Ill. Adm. Code 218.586(h) or to obtain a permit under this Part if applicable.

(Source: Amended at 18 Ill. Reg. 15002, effective September 21, 1994)

SUBPART L: CONTINUOUS MONITORING**Section 201.401 Continuous Monitoring Requirements**

- a) Except as otherwise provided at Section 201.402 and Section 201.403, the owners and operators of the following emission sources shall install, operate, calibrate and maintain continuous monitoring equipment for the indicated pollutants.
 - 1) Fossil fuel-fired steam generators with an annual average capacity factor greater than 30%, as reported to the Federal Power Commission for calendar year 1974, or as otherwise demonstrated to the Agency through the use of annual production data and equipment rating information representative of the facility's operations, shall monitor for:
 - A) Opacity, when the steam generator is greater than 250 million Btu per hour heat input unless:
 - i) Gas is the only fuel burned; or
 - ii) Oil or a mixture of gas and oil are the only fuels burned and the source can comply with the limitations applicable to that source for particulate matter and opacity without use of collection equipment for particulate matter and the source has never been found to be in violation of an applicable visible or particulate emission standard through any administrative or judicial proceedings.
 - B) Nitrogen oxides, when:
 - i) The steam generator is greater than 1000 million Btu per hour heat input;